

## Some Visits to Batam Island.

C. BODEN KLOSS, F.Z.S.

Pulo Batam though so close to Singapore and frequently visited by pig-shooters, has never been investigated by a naturalist, so perhaps the following extracts from journals—though of trivial happenings as must necessarily be the case where the fauna of small islands is concerned—kept during two short visits I paid to it to collect animals may be of interest.

This island is 9 miles distant from Singapore, about 15 miles long and 10 miles broad. The northern side is indented and elsewhere it is closely surrounded by other islands. There are hills in the interior covered with jungle, where large outcrops of quartz occur and the boulders are a quartz grit. Much of the low land which has at one time been cleared is swampy or sandy and very poor but where red laterite soil occurs pineapples flourish under the cultivation of Chinese and Bugis settlers. Many young getah trees (*Dichopsis* sp.) are found in the forests where roam a tribe of Proto-Malays still little affected by outside influences.

My first visit was paid in September 1905. I left Singapore in a 10-ton cutter-yacht at 11 a.m., got caught in a squall off Pulo Sambu in the afternoon, ran on to a sand-bank at low tide later on but poled off, and anchored off a kampong at the head of Senimba Bay at 5.30 p.m. The upper part of the bay is very shoal and at low water wide mud-flats are exposed all round. I collected some interesting small sponges of bright colours on them. There were seven houses in the kampong and others building further along the shore.

After getting the baggage landed next morning we found a deserted Chinese shop behind the village. This we broke open and throwing all the rubbish it contained into a side compartment, I set up my bed, table and chair in the centre room while the boy fixed up his kitchen and sleeping place

in a third. There was a hole of good drinking water at hand and a bathing well a little farther off so we felt very comfortable.

A row of wooded hills ran south-easterly towards the centre of the island, a river debouched at the head of the bay and across the water a couple of miles away were the slopes of a long peninsula.

As I sat talking to the natives in the doorway of my house in the afternoon we saw the eyes of a large crocodile above the calm water about 140 yards away and I was asked to shoot it but refused since my gun was only sighted to 100 yards. However, being pressed, I took a very full sight and fired from my chair; there was a furious turmoil and the reptile disappeared. The natives said it was hit, and indeed three or four days later we found it in the mangroves with its brains flicked out—a 13-footer. When afterwards invited to repeat the performance I was not to be tempted—it was a case of letting well alone.

At 3 p.m. I went out with a parang and found a path going up the hills; cleared it and set 3 dozen traps. Coming back found a pair of “tupai tanah” (*Tupaia ferruginea batamana* sp. nov.) just caught and saw several small pigs. Skinned tupaia and after dinner went along the shore for pig but saw none.

“16th. Set off at 5.30 a.m. to examine the traps which contained a number of rats (*Mus lingensis*) and some tupaia, all much ant-eaten. Found this hill jungle practically lifeless as the forest was poor being without fruit trees, but got a species of civet cat (*Arctogalidia simplex*) which was a valuable prize, and a horn-bill—the “burong klinking” (*Anthracoceros convexus*). Skinned till 5.30 and then reset traps. Lent the gun in the evening to a man who wanted to try for pigs in his plantation.

“17th. No pig seen by the natives. Very little in traps so brought some away and set them lower down amongst coconuts. Got a pair of horn-bills and some squirrels (*Sciurus vittatus*) with the .410 gun amongst the palms; both these are numerous near the village and horn-bill steak is

very good. Some men went to set "jerats" for napu and borrowed the gun in order to try for lotong and krawar (*Ratufa* sp.) and coming down myself from setting traps without it I saw a large bearded pig!

"18th. Some fresh rats from the coconuts: one appears to be *Mus jarak* and the other rather like *Mus griseiventer* of Johor. Went to the Bugis plantations inland to the S. W. of the range. They are on poor flat land and consist of pines, bananas and tapioca: the forest beyond, which was swampy and largely composed of *Melaleuca* trees, was quite empty. The napu-trappers had no luck.

"19th. A couple of small concolorous rats from the coconuts. Away to another patch of jungle beyond the gardens but was disappointed as it was merely a small clump with swamp on the far side. A boy brought some "tikus padi" caught in his house. In afternoon went along foot of hills after pig: saw monkeys only but couldn't get near as they went to ground at once, which makes me think they were "berohs." 25 skins to date.

"20th. Set off for the distant jungle beyond the hills and almost immediately got a "klabu" in the mangroves near the house—a female *cristata*, weight 11 lbs. Had much trouble getting through secondary growth and "resam" fern but finally entered the forest and found a path running along a deep gully where a *Didymocarpus* with violet flowers was growing amongst the rocks. Saw a few common birds but no animals, except another lotong which I got. Found a better way home where two napus were awaiting me, both very large and bright with clear orange necks. Set traps and waited again for pig.

"21st. Heavy rain all morning so stopped in and skinned the napus. Went out later along the ridge of the hills but got nothing. The view of land and water, north and west was very fine but could see very little jungle in the interior.

"22nd. Off to the far jungle where I saw absolutely nothing but think I heard the cry of a *Ratufa*. The few traps out had been interfered with by a pig. 39 animal skins.

"23rd. Hired a large leaky boat and paddled and sailed to Pulo Sambu where we found a launch going to Singapore which gave us a lift: arrived home 9 p.m."

My second visit to Batam was the outcome of a desire to collect on Bulang Peak. I left Singapore on March 18th 1906. I had a Malay prau on this occasion which didn't sail anything like as well as the cutter and we had to do a lot of rowing, particularly amongst the tide-rips behind Pulo Sambu. However we got to Pulo Boyan, where the Controleur is stationed, at seven o'clock and anchored in the strong tide of the Batu Hadji Straits for the night.

I found that the Controleur, who was newly appointed, could give me no information about Bulang but he courteously offered me the services of a constable for the trip which I refused as a useless encumbrance. There was a strong tide against us and no wind all the morning so we passed the time in filling our water-jars from a well on Bulang, as there is no water on the small island, and in the afternoon when the tide slackened we made sail again, reaching at night-fall the kampong where I had hoped to put up. It was in ruins and had evidently been deserted for a long time but I was less disappointed, in that next morning when I made a trip to the Peak I found the way thither to be through swamps while the hill itself had been cleared except on the top, and there was no sign of animal life anywhere. So we sailed back again looking for a place to stop at, but both sides of the strait had been long cleared and were no use for collecting and as I was not provided with any sort of material to form a shelter I decided to put in at Telok Senimba once more—as I was particularly anxious to shoot the bearded pig—and see if I could not add to my former list of specimens, though the locality was not a good one as there was so much cleared land and swamps while the accessible jungle was on hill sides and exceedingly poor. There are no doubt more satisfactory places in the interior but thither one would have to go prepared to camp out.

After leaving the sheltered strait we had a lively time against a strong head wind: the prau, with peak dropped,

wouldn't tack in the rough weather and we had to wear every time but when we got into Senimba Bay it was a nice reach down to the kampong. It was low tide and there was a pig on the mud as we arrived so I paddled off towards him with the gun but lost his track in the mangroves. I had been at the tiller for eight hours without a spell and was painfully sun-burnt.

My old dwelling place had been pulled down but another Chinaman had built another unsuccessful shop so we appropriated the empty place as before; and then I had a most glorious bath, hitherto having to be content with a dip in the sea of nights which was a great discomfort but this occasion squared it all.

"22nd. Went along the range at day-break but saw only "krahs": cut a path down the far side along the bed of a dry ravine in hopes of finding jungle beyond but there were only stretches of dense scrub. Spent the afternoon on the mud collecting stone-corals and sponges, small kinds of every possible shape and colour. The kampong women catch shell fish in a rather ingenious manner: they search the exposed mud for the hole in which the mollusc lives and then push down a stout piece of the midrib of a rattan palm about twenty inches long and armed at the end with a pair of reversed thorns, and the bivalve lying open at the bottom of the hole closes on the thorns when touched and is drawn up. Got my traps out towards evening and then watched for pig, with no success.

"23rd. Found a *Mus firmus* in the traps; this was not in the last collection. A blank morning on the hill except for a specimen of the beautiful rose-breasted pigeon (*Philopus jambu*). Tried a small island across the mud flats where pig were reported but saw none: the mud was fearful stuff to travel through.

"24th. An absolutely blank morning in the jungle but two napus were brought in and gave something to do. Full moon is said by all hands to be the best time for catching mouse-deer. Lent a gun to a would-be shooter who as usual swore to whole rafts of pigs which never seem to materialise.

Found that the new lantern I intended to do night shooting with had no wick so made some out of a piece of towel and went for a long walk with it on my belt after dinner: no result except that I was nearly choked by the smell of burning paint.

"25th. A futile morning in the forest: found a collection of old shelters, Malay *pondok* type, probably made by the "orang utan" of Batam. Half a dozen rats, but all badly damaged by ants. Sat out all the evening in a deserted garden and just before dark a medium-sized "nang-oi" trotted up. Fired at 60-70 yards and found immediately—not for the first time—I had forgotten to put the rifle lever over. Pig cleared away into lallang warmed up by slugs: nothing else put in an appearance except mosquitoes. My gun-borrowing friend said with truth pigs were to be seen in the clearings if watched for long enough!

"26th. Nothing in the traps and only monkeys in the jungle. Set some large traps for musang and afterwards watched for pig. Went for a walk with bulls-eye after dinner but saw nothing.

"27th. Only two specimens in the traps: had to shoot squirrels to make work. The pig-shooter returned his gun; says he has sat up for three nights without seeing anything. A large trap caught a tortoise (*Cyclemys platynota*) later in the day. No luck with the pigs again. Found a large centipede in my mosquito net which should evidently have been taken as a sign that the bed was not safe as in the night a coconut crashed through the roof and landed on my pillow (Memo. always to strip coco-palms before dwelling beneath them).

"28th. The usual frost in the jungle. A young napu was brought in and another tortoise got into the traps; evidently these reptiles are attracted of the putrid meat which forms the bait. A pig had also been caught but he successfully pulled out."

This sort of thing went on for several days during which I got nothing but monkeys, rats, squirrels and tupaia. Traces of pigs were everywhere, huge tracks some of them, and I



twice stampeded the animals in dense vegetation but I was never able to catch sight of them and the spring-guns I set were never effective. However I got a new rat in some beach forest, a very beautiful specimen of the *jerdoni* type which made me feel glad I had come to the island again.

One afternoon I went up the river which after some distance turned completely on itself and ran south. It was entirely mangrove bordered, though once or twice there were glimpses of old clearings. A number of small side streams were probably only drainage of the swamp. We landed on an isolated hill where were paths and found some old "jerats" for mouse-deer. The jungle trees were nearly all of a bark-shedding kind but I saw a quantity of the red stemmed palm (*Cyrtostachys* sp.) and collected some orchids—*Grammatophyllums* being plentiful on the mangroves.

As I appeared to have exhausted the district after having made 49 mammal skins, many of the species reported apparently not occurring there, on April 3rd we loaded the prau and rowed down the bay to its head where we got a slight breeze. Outside a strong ebb set us to the eastward but as we neared Singapore Island we met the flood which carried us into the harbour in time to get everything home before night.

I obtained thirteen species of mammals during the two visits and observed two others, while nine more were reported to exist. Thus Batam is by no means exhausted: for if they really occur, the determination of the reported *Presbytes*, *M. nemestrina*, *Paradoxurus*, *Sciuropterus* and *Ratufa* will be interesting, but to obtain this it would probably be necessary to camp in the middle of the island where good jungle may still exist.

#### MAMMALS OF BATAM.

1. *Presbytes cristata* (Raffles) is fairly common in small herbs both in forest and mangroves. It is known to the natives by the name of "Klabu."
2. *Presbytes species*. A "Kaka" with a white breast was reported to occur. If this is a fact I am inclined to

think it will be the *P. cana*, Miller, of Pulo Kundur and E. Sumatra rather than *P. rhionis*, Miller, of Bintang Island. These are local forms of *P. femoralis* which, though found in the Peninsula and Sumatra, does not occur on the islands of the Rio-Lingga Archipelago.

3. *Macaca nemestrina*, Linn. The "beroh" was said to occur but has not yet been taken in the Archipelago.
4. *M. fascicularis*, (Raffles). The "krah" is common everywhere.
5. *Cynopterus montanoi*, Robin. Bats, apparently of this species, were fairly common and were the only kind I obtained. Malay nama "klawar."
6. *Galeopithecus volans*, Linn. The "kubong" was said to occur.
7. *Tupaia ferruginea batamana*, Lyon. This new subspecies of the "tupai tanah" was exceedingly common. Externally it only differs from *T. ferruginea*, Raffles, in its slightly greyer tail. It is easily separated however by its longer and wider skull.
8. *Arctogalidia simplex*, Miller. This is the Archipelago form. A specimen, the third known, was shot early one morning while it was running along the branch of a high tree. As the people called it a "musang" which they said was common I presume that
9. *Paradoxurus hermaphroditus*, Pallus, or an allied form occurs.
10. *Mus concolor*, Blyth was taken in the Kampongs where it was not uncommon.
11. *Mus firmus*, Miller, is the Sumatran form of the Peninsula *M. validus*, Miller. I have never taken these except on the banks of fresh water streams.
12. *Mus lingensis*, Miller. The Sumatran form of *Mus surifer*, Miller. A dry jungle rat and exceedingly common. It seems to begin feeding at early twilight



as traps specimens are always more damaged by ants than any other kind.

13. *Mus sp.* near *rattus*. The rats provisionally grouped under this heading are most perplexing. They fall readily into two groups which handle in the flesh as extremely distinct. The one division, almost black above with whitish bellies, are finely built animals with very pointed noses and closely resemble *M. jarak*, Bonhote, from Johore. The others with greyish bellies and backs rather like *M. norvegicus* are coarsely built and muzzled and somewhat approximate to *M. griseiventer*, Bonh., of Johore. All these were taken in swampy ground near the sea as was *Mus jarak* which I found only amongst mangroves. *Mus griseiventer* however is a Kampong rat.
14. *Mus batamanus*, Lyon. This new species is of the *jerdoni* type. It is a very beautiful shaped rat and the only specimen I obtained was captured in damp littoral forest. Swampy ground seems the habitat of all this group.
15. *Mus musculus*, Linn. Some specimens of the "tikus padi" were brought me by a Bugis boy who had captured them in his house.
16. *Sciuropterus*, sp. Reported; possibly the *amænus*, Miller of Kundur Island.
17. *Petaurista*, sp. The "kubin" was said to occur.
18. *Ratufa*, sp. Reported. A yellow type, probably near *R. insignis*, Miller, of Pulo Sugi.
19. *Sciurus vittatus*, Raffles. Exceedingly common in the coco-nuts where it was very destructive. Cannot be distinguished in any way from Sumatran and Peninsula forms.
20. *Sciurus tenuis*, Raffles. Reported as very rare. I only know of one specimen from the Archipelago, taken on Lingga Island.

21. *Sus rhionis*, Miller. Observed. This is the "babi bakau" of the natives and is common everywhere. It is the island form of *S. vittatus*.
22. *Sus oi*, Miller. Observed. The "nang-oi" is plentiful but to a solitary collector pigs are difficult to obtain. Generally one is only aware of their presence by a rush through the undergrowth and distant snorts and unless one is lucky in meeting them in the open they rarely figure in collections. The "nang-oi" does great damage to the pineapple plantations and is said to be far less timid than other pigs: in fact the natives reported that boars often merely grunted when they tried to scare them away. They are afraid to shoot it with their ineffective ammunition as it charges when wounded. It ranges from Batam to Banka and throughout the swamp of E. Sumatra.
23. *Tragulus kanchil*, sp. A "pelandoc" is said to occur.
24. *Tragulus javanicus perflavus*, Miller. This new species is a strongly marked form having very bright pelage and a pure orange neck entirely free from black shading. I have it also from Pulo Galang and it has been taken since on Bulang. It affords a particularly good illustration of local variation as *T. formosus*, Miller of Bintang Island, only five miles away, is exceedingly dark with a collar strongly washed with black.

Thus the mammal fauna of Batam is Sumatran and not Peninsular for the above definitely identified species *Mus concolor* and *Cynopterus montanoi* alone are from the Peninsula only. On the other hand, *Mus lingensis*, *M. firmus* and *Sus oi* are known from the Sumatra and the Rio-Lingga Archipelago only. *Arctogalidia simplex*, *Sus rhionis* and *Tragulus perflavus* are found elsewhere only in the Archipelago while *Tupaia ferruginea balamana* and *Mus batamanus* are so far known from Batam alone.

I am inclined to think that Batam, Bulang, Rempang and Galang form a small group which faunistically is more nearly related to the islands to the westward than to Bintang

on the east, though Pulo Sauh forms a stepping stone to the latter which is only five miles away. Bintang, however, when it is fully investigated will prove to be by far the most interesting island of the whole archipelago. A bank of less than 20 fathoms connects all these islands with both Sumatra and the Peninsula, but the 10 fathom contour lines break them up into various groups of which that above noted is one of the largest.

I have no notes of value about birds for they were scarce and of common species and I soon left off shooting them.

Small collections of reptiles and insects were made but they contained nothing remarkable.

I preserved a few plants during my visits and two of them, which were new, have lately been described by Mr. H. N. Ridley, viz:—*Neckia Klossii* and *Didymocarpus battamensis*.<sup>1</sup> The latter is interesting since it grows at sea-level while I believe that the habitat of the *Didymocarpi*, in this locality at least, is at some altitude.

A few notes on the inhabitants of Batam are given elsewhere in this Journal.

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1. J. S. B. R. A. S. No. 49.